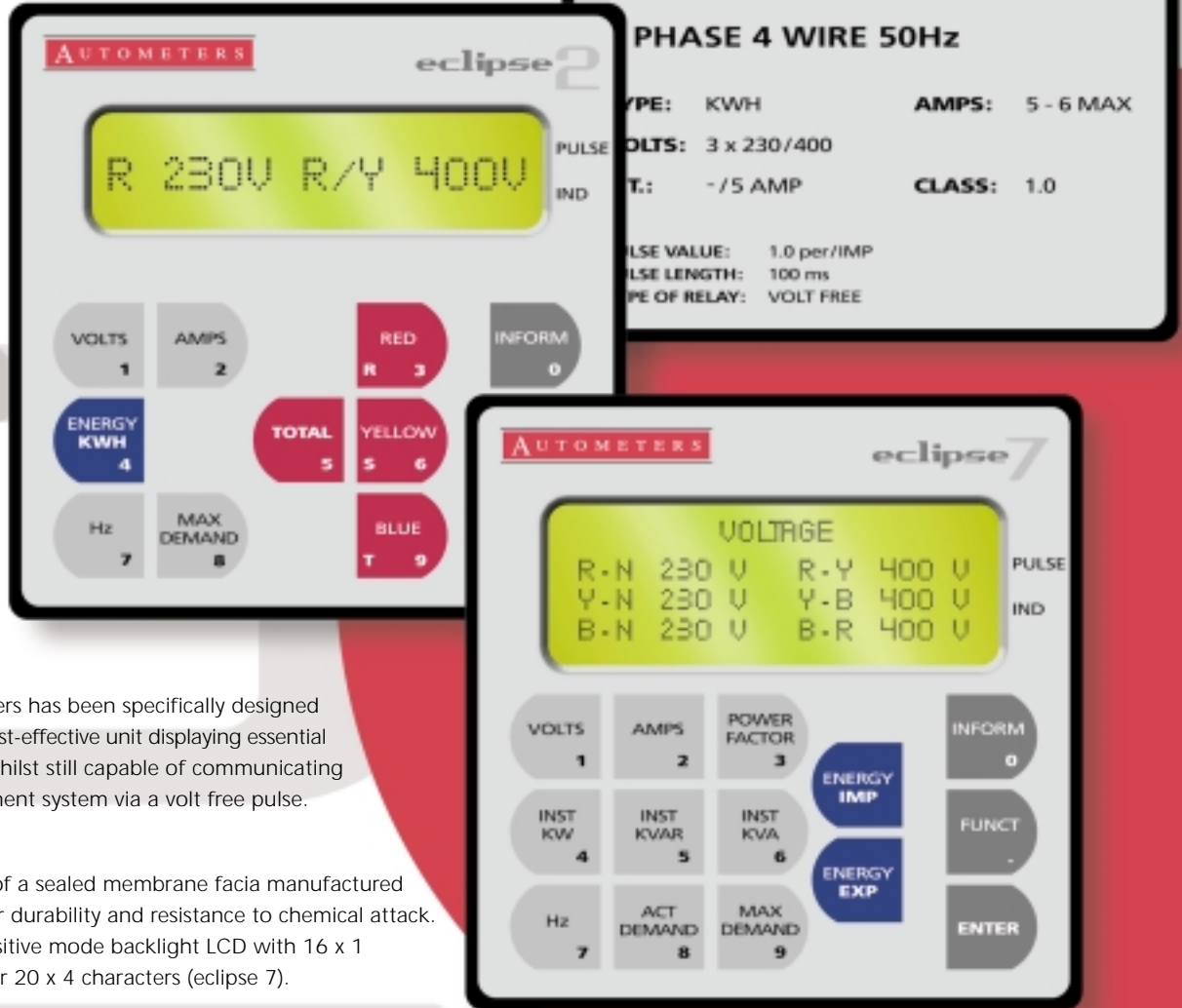


eclipse

range of meters



general operation

The eclipse range of meters has been specifically designed and manufactured as a cost-effective unit displaying essential yet limited information whilst still capable of communicating with an energy management system via a volt free pulse.

front panel

The front panel consists of a sealed membrane facia manufactured from polyester for greater durability and resistance to chemical attack. The display is either a positive mode backlight LCD with 16 x 1 characters (eclipse 1, 2) or 20 x 4 characters (eclipse 7).

On pressing the information key, a sequence of readouts indicating the meters' parameters will be displayed on the front panel:

- model number
- meter number
- details of number
- CT setting
- relay output
- relay closure settings
- active features

measurement accuracy

The accuracy-critical components in the measurement circuitry are all passive, high quality and stable. The amount of drift is negligible, any which may occur is corrected automatically using a sophisticated auto-reference calibration technique.

The eclipse range conforms to IEC Section 4.6.1 Accuracy Class 1.0 Overall measurement accuracy is, however dependent on the accuracy of the external CT (and potential transformer (PT) if used).

On power-up the meter will display:

- autometers
- the model number
- the software reference
- the current transformer setting
- the meter number

The meter will automatically default to kWh.

eclipse 1	
3 phase 4 wire (LV) kWh	230/400 Volts, 5 Amps (CT operated) total kilowatt hours total kilovar/hour
eclipse 2	
3 phase 4 wire (LV) Volts	230/400 Volts, 5 Amps (CT operated)
Amps	phase to phase, phase to neutral
Hz	phase to neutral, total system frequency
kWh	total kilowatt hours
Max Demand	peak, actual with time in period displayed
eclipse 7	
3 phase 4 wire (LV) Volts	230/400 Volts, 50 Hz, 5 Amps (CT operated)
Amps	phase to phase, phase to neutral
Power Factor	phase to neutral, total phase to neutral, total
INST kW	phase to neutral, total phase to neutral, total
INST kVAR	phase to neutral, total phase to neutral, total
INST kVA	phase to neutral, total system frequency
Hz	present demand with time into period kW, kVAR, kVA, kA
Act Demand	peak demand kW, kVAR, kVAh, kA
Max Demand	total kWh, kVARh, kVAh
Energy IMP	total kWh, kVARh
Energy EXP	factory programmable to either kWh, kVARh or kVAh
Pulse Output	

sequence

The eclipse 2 is a two key operation device, to obtain information e.g. volts, press the VOLTS key. The following is displayed:



By pressing one of the keys under the arrows it will display one of the following phase details. E.g. by pressing RED key the following is displayed:



This gives a readout between Red Phase and Neutral and Red Phase to Yellow Phase. To obtain information on Yellow Phase or Blue Phase, press VOLTS and the appropriate (YELLOW) or (BLUE) key. If a phase has been selected then only the phase colour need be pressed.

The eclipse 7 is a single key operation device. To obtain information press the appropriate key: e.g. to display voltage, press the VOLTS key. The following information will be displayed showing readout between phase to phase and phase to neutral:



kWh pulse outputs

The eclipse range is fitted with one volt free relay programmed at 1kWh per pulse, visible indication of the pulse output is available on the display.

system use

The eclipse range is ideally suited for stand-alone monitoring. The eclipse 7 offers full system monitoring for main supplies. With their reduced features the eclipse 1 & 2 are ideal for sub meter measuring of multiple locations or departments.

measurements

measurement ranges

The unit is designed for measuring 3 phase in a 4 wire star configuration.

volts

+ 10% nominal voltage

accuracy

Energy measurements comply to:
kWh:IEC 1036 section 4.6.1 class 1.0
kVARh:CEI IEC 1268 class 2.0

burden

Current burden less than 1 VA.

drift

Negligible, self-compensating circuit.

display

The display is a negative image 20 x 4 characters. Dimensions of the characters are 2.3mm wide by 4.03mm high (5 x 8 dots). Expected lifetime under normal operating conditions is a minimum of 100,000 hours.

temperatures

Operating temperatures: -20°C to +70°C
Storage temperatures: -30°C to 80°C

membrane switch

Operating force 100-500 crs.
Switch life 8-10 million operations (IP65 sealed).

outputs

One volt free relay is available and can be set in the factory to supply a pulse output for kWh, kVARh and kVAh.

Pulse width: Programmable, Factory set 100ms
Pulse value: Programmable, Factory set 1kWh

relay contacts

Maximum switching voltage: 600 Volts AC/DC
Maximum switching current: 100mA
Resistance: 50chms
Type: Optically isolated, MOSFET switch

voltage range

Models are available between 180-280 Volt 50Hz/60Hz

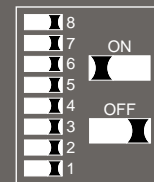
functions

eclipse 2 and 7 (supplied as standard)

- Function 12 Peak maximum demand reset
- Function 13 Programmes C.T. setting
- Function 15 Programmes the neutral C.T. setting (if fitted)
- Function 50 C.T. polarity check
- Function 53 Pulse status check
- Function 60 Programmes the pulse value
- Function 61 Programmes the pulse time

programmable C.T.

eclipse 1
Setting (by means of a binary switch as diagram).



Product development is continuous and Autometers Ltd reserves the right to make alterations and manufacture without notice. Products as delivered may therefore differ from the descriptions and illustrations in this publication.



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